

CLAIMS

What is claimed:

1. An apparatus, comprising:
a wafer susceptor having a wafer pocket to contain a wafer, the wafer pocket having a pocket depth; and
a plurality of tabs to maintain the wafer in the wafer pocket, the tabs having a tab height that is independent of the pocket depth.
2. The apparatus of claim 1, wherein the wafer pocket includes a sidewall having a sidewall height defining the depth of the wafer pocket, and the plurality of tabs having a tab height greater than the sidewall height.
3. The apparatus of claim 1, wherein the plurality of tabs are affixed to a sidewall of the wafer pocket.
4. The apparatus of claim 1, wherein the plurality of tabs are vertically movable so that the tab height can be positioned in a different vertical orientation relative to the pocket depth.
5. The apparatus of claim 1, wherein the tabs have rounded corners and edges that will not substantially interfere with a laminar gas flow.

6. The apparatus of claim 1, wherein the wafer pocket includes a grooved bottom surface to prevent a vacuuming effect between the wafer and the susceptor.
7. The apparatus of claim 1, wherein the plurality of tabs extend into the wafer pocket and are configured to maintain the wafer centered in the pocket and to keep the wafer away from a thermal influence of the sidewall.
8. The apparatus of claim 1, wherein the pocket depth is about 0.018 inches and the tab height is about 0.034 to about 0.04 inches.
9. The apparatus of claim 1, wherein the plurality of tabs extend into, and directly toward, the center of the pocket and have a length of about 0.125 inches and a width of about 0.063 inches.
10. The apparatus of claim 1, wherein the plurality of tabs extend into the wafer pocket and are configured to maintain the wafer centered in the pocket and to keep the wafer away from a thermal influence of the sidewall.
11. The apparatus of claim 1, wherein the plurality of tabs are removable and wherein the susceptor includes a plurality of indentations that form fit to individual bottom portions of the plurality of tabs to maintain the tabs in a stable,

upright position.

12. An apparatus, comprising:

a wafer susceptor having a wafer pocket to contain a wafer, the wafer pocket defined by a bottom surface and a cylindrical sidewall, the wafer pocket having a depth that is defined by the height of the cylindrical sidewall, the grooved bottom surface having a plurality of through holes therein that extend entirely through the susceptor, the through holes positioned adjacent to the cylindrical sidewall; and

a tab holder having a plurality of tabs, each of the plurality of tabs having a tab height that is independent of the pocket depth, the plurality of tabs to be inserted into the plurality of through holes from below the susceptor and raised to a height adapted to maintain the wafer confined to the pocket during wafer processing.

13. The apparatus of claim 12, wherein the shape of each individual through hole allows each individual tab to pass through unobstructed.

14. The apparatus of claim 12, wherein the tab holder includes arms extending radially from a centralized hub.

15. The apparatus of claim 12, wherein the tab holder is capable of being

raised and lowered so that the plurality of tabs can be raised and lowered through the through holes.

16. The apparatus of claim 12, further comprising a rotatable susceptor holder to support and rotate the susceptor, and wherein the configuration of the tab holder is compatible with the configuration of the rotatable susceptor holder in a way that does not interfere with the rotatable susceptor holder during wafer processing.

17. A method, comprising:
placing a wafer inside a wafer pocket of a susceptor, the wafer pocket defined by a cylindrical sidewall and a bottom surface.
positioning a plurality of tabs into a raised position above the wafer pocket, the raised tabs having a height adapted to contain the wafer inside the wafer pocket when the wafer attempts to leave the wafer pocket; and
performing a wafer processing procedure.

18. The method of claim 17, wherein the susceptor includes a plurality of through holes therein that extend entirely through the bottom surface of the wafer pocket, the plurality of through holes positioned along the perimeter of the wafer pocket along the cylindrical sidewall, and the method further comprising:
raising the plurality of tabs through the plurality of through holes until

the plurality of tabs are raised to the adapted height.

19. The method of claim 18, including raising the plurality of tabs before a processing techniques is performed that will cause the wafer to become stressed to a degree that a portion of the wafer raises above the cylindrical sidewall and attempts to leave the wafer pocket.

20. The method of claim 18, further comprising:
lowering the plurality of tabs during processing techniques that do not stress the wafer to a degree that would cause the wafer to leave the wafer pocket.

21. The method of claim 17, wherein the susceptor includes a plurality of indentations, and wherein the plurality of tabs are removable tabs each having a bottom portion that form fits to the indentations, and the method further comprising:
placing the plurality of removable tabs into the indentations.